

Public comment follow-up from March 4<sup>th</sup> Public Comment Meeting, San Diego California  
Recommendation to add a line item the recommendation #1 table, related to Sub Irrigation Efficiency Factor.  
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The following is the full addition to the current “Public Draft Report”

## SECTION 6: STATE MODEL WATER EFFICIENT LANDSCAPE ORDINANCE (MWELO) FUTURE REVISIONS & PROCESS UPDATES

### RECOMMENDATION #1: MWELO Future Revisions for the Next Review Cycle

#### Background

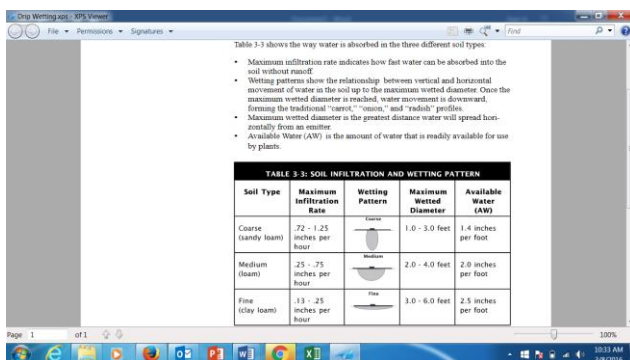
Current MWELO has irrigation effecency factors for overhead spray devices (.75) and for drip (0.81). The overhead effencecny factor is base on surface distribut uniformity. Surface distribution effecency in effect detrimnes that 75% of the area needs to be overwater in order to meet the needs of the lower 25%. In the “EPA Water Sense: Notice Of Intent (NOI) to Develop a Draft Specification for Landscape Irrigation Sprinklers” states that “As much as half of the water is wasted due to evaporation, wind, or runoff”

Drip has less lost to evaporation, but still has a large foot print subject to surface evaporation. Drip has nearly no waste to run off and no waste to wind.

Sub irrigation may have the greatest saving potential with no lost to evaporation, wind or run off. In theory the equation ETo would lose the “E” and become To. This could be the ideal equation for California and meet the vision statement to cut potable landscape watering by 50%. To eliminate the E from ETo sub-irrigation should be place at less 18” or more depth and allow natural upward capillary action. This would limit the amount of soil moisture subject to air temperature evaporation and help meet the To equation.

To encourage more development in this area a high efficiency factor is recommend. The goal is to encourage 1) Innovation product development 2) Development of best practices and 3) spur additional conservation.

Samples of drip irrigation moisture profile



Page 19 from Rain Birds: Low-Volume Landscape Irrigation Design Manual. Showing estimated surface evaporation zone.



Sample or sub surface drip tube, 18" below the surface line.

### Purpose Statement

In line with the Independent Technical Panel Vision Statement and recommendation goal of reduce potable water use on urban landscapes statewide on the order of 50% percent from pre drought levels over the next 20 years. The Technical Panel would like to encourage innovation in both product development and in best practices.

The tools that are available to the Technical Panel to spur such innovation advancements are limited MWELO and this document. Given that evaporation is a large contributing factor of water lost / efficiency the Technical Panel would like to encourage innovation on eliminating "E" or lower "E" from the equation of ETo.

It is recommending an efficiency factor of 125% be applied to any sub irrigation place 18" or more below the surface. This efficiency factor has a temporary innovation period of 5 years from date of adoption. During this period Technical Panel would encourage research and research data to support the efficiency factor beyond the 5-year innovation encouragement period.

### The Independent Technical Panel Recommends That:

(aa) ~~(z)~~ "irrigation efficiency" (IE) means the measurement of the amount of water beneficially used divided by the amount of water applied. Irrigation efficiency is derived from measurements and estimates of irrigation system characteristics and management practices. The ~~minimum average~~ irrigation efficiency for purposes of this ordinance are 0.75 for overhead spray devices and 0.81 for drip systems. ~~is 0.74. 1.25% for sub irrigation place 18" below the surface (not including the required mulch layer)~~